

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier/ Name: Diisobutyl Ketone

Synonyms, Trade Names: 01137-00

Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Solvent

Uses advised against: None known.

Details of the supplier of the safety data sheet

Manufacturer / Supplier

Solvents and Petroleum Services, Inc.
1405 Brewerton Rd, Syracuse, NY 13208
800-315-4467
mark@solventsandpetroleum.com

Emergency telephone number:

For emergency transportation information, in the United States: call CHEMTREC at 800-424-9300

SECTION 2: Hazards identification

Hazard classification:

Physical hazards

Flammable liquids Category 3

Health hazards

Specific target organ toxicity - single exposure Category 3

OSHA Specified Hazards: not applicable

Warning label items including precautionary statement:

Pictogram:



Hazard Statement(s): H226: Flammable liquid and vapor.
H335: May cause respiratory irritation.

Precautionary statement:

Prevention: P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233: Keep container tightly closed.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting/equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P271: Use only outdoors or in a well-ventilated area.

Response: P370 + 378: In case of fire: Use water spray, carbon dioxide, dry chemical or foam for extinction.
P303+P361+P353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.

Storage: P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P235: Keep cool.
P405: Store locked up.

Disposal: P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): Potential peroxide former. Prolonged or repeated skin contact may cause drying, cracking, or irritation.

SECTION 3: Composition/information on ingredients

Substances / Mixtures

General information:

Chemical name	Concentration	Additional identification	Notes
2,6-dimethyl-4-heptanone	60 - 70%	CAS-No.: 108-83-8	
4,6-dimethyl-2-heptanone	30 - 35%	CAS-No.: 19549-80-5	
2,6-dimethyl-4-heptanol	<2%	CAS-No.: 108-82-7	

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
This substance has workplace exposure limit(s).

SECTION 4: First aid measures

Description of first aid measures

Inhalation: Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.



Eye contact:	Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention. In case of irritation from airborne exposure, move to fresh air. Get medical attention if symptoms persist.
Skin contact:	Wash with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
Ingestion:	Seek medical attention.
Most important symptoms and effects, both acute and delayed:	May irritate and cause redness and pain.
Indication of any immediate medical attention and special treatment needed	
Hazards:	None known.
Treatment:	Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards:	Flammable liquid and vapor. USE WATER WITH CAUTION. Material will float and may ignite on surface of water.
Extinguishing media	
Suitable extinguishing media:	Water spray. Dry chemical. Carbon Dioxide. Foam.
Unsuitable extinguishing media:	None known.
Special hazards arising from the substance or mixture:	Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations. May form peroxides of unknown stability.
Advice for firefighters	
Special fire fighting procedures:	Water may be ineffective in fighting the fire. Use water spray to keep fire-exposed containers cool. Fight fire from a protected location.
Special protective equipment for fire-fighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:	Wear appropriate personal protective equipment.
Environmental precautions:	Avoid release to the environment.

Methods and material for containment and cleaning up:

Eliminate sources of ignition. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Large Spillages: Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal.

Notification Procedures:

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

SECTION 7: Handling and storage:

Precautions for safe handling:

Avoid breathing mists or vapors. Avoid prolonged or repeated contact with skin. Use only with adequate ventilation. Wash thoroughly after handling. Minimize exposure to air. If peroxide formation is suspected, do not open or move container.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed and in a well-ventilated place. Store away from heat and light.

Specific end use(s):

Solvent

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational exposure limits

Country specific exposure limits have not been established or are not applicable unless listed below.

Chemical name	Type	Exposure Limit values	Source
2,6-dimethylheptan-4-one; di-isobutyl ketone	TWA	25 ppm	US. ACGIH Threshold Limit Values (01 2010)
	PEL	50 ppm 290 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Exposure controls

Appropriate engineering controls:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information:

Eye bath. Washing facilities. Safety shower.

Eye/face protection:

It is a good industrial hygiene practice to minimize eye contact.

Skin protection

Hand protection:

It is a good industrial hygiene practice to minimize skin contact. For operations where prolonged or repeated skin contact may occur, chemical-resistant gloves should be worn. Contact health and safety professional or manufacturer for specific information.

Other:

No data available.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Hygiene measures:

Observe good industrial hygiene practices.

Environmental Controls:

No data available.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance

Physical State:	Liquid
Form:	Liquid
Color:	Colorless
Odor:	Mild
Odor Threshold:	0.11 ppm
pH:	No data available.
Boiling Point:	163 °C
Flash Point:	49 °C (Tag closed cup)
Evaporation Rate:	0.2
Flammability (solid, gas):	No data available.
Flammability Limit - Upper (%)-:	No data available.
Flammability Limit - Lower (%)-:	No data available.
Vapor pressure:	2.3 mbar (20 °C)
Vapor density (air=1):	4.9
Specific Gravity:	0.81 (20 °C)
Solubility(ies)	
Solubility in Water:	Negligible
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	(DTA) No exotherm to 450°C
Dynamic Viscosity:	No data available.
Kinematic viscosity:	Not determined.
Explosive properties:	No data available.

Oxidizing properties: No data available.

Other information

Minimum ignition temperature: 396 °C (ASTM D2155)

SECTION 10: Stability and reactivity

Reactivity:	None known.
Chemical stability:	Stable
Possibility of hazardous reactions:	On long term storage, materials containing similar functional groups form peroxides of unknown stability.
Conditions to avoid:	Heat, sparks, flames.
Incompatible materials:	Strong oxidizing agents.
Hazardous decomposition products:	Carbon Dioxide. Carbon Monoxide.

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation:	May cause respiratory irritation.
Ingestion:	None known.
Skin contact:	Prolonged or repeated skin contact may cause drying, cracking, or irritation.
Eye contact:	None known.

Information on toxicological effects

Acute Toxicity

Oral

Product: No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone	Oral LD-50: (Rat): > 3,200 mg/kg (highest dose tested) Oral LD-50: (Mouse): > 3,200 mg/kg (highest dose tested)
4,6-dimethyl-2-heptanone	No data available.
2,6-dimethyl-4-heptanol	No data available.

Dermal

Product: No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone	Dermal LD-50: (Guinea Pig): >20 ml/kg (highest dose tested) Dermal LD-50: (Rat): > 2,000 mg/kg
4,6-dimethyl-2-heptanone	No data available.
2,6-dimethyl-4-heptanol	No data available.



Product:	No data available.
Specified substance(s)	
2,6-dimethylheptan-4-one; di-isobutyl ketone	LC50 (Rat, 6 h): 1979 ppm no deaths from exposure to nearly saturated vapor
4,6-dimethyl-2-heptanone	No data available.
2,6-dimethyl-4-heptanol	No data available.
Repeated dose toxicity	
Product:	No data available.
Specified substance(s)	
2,6-dimethylheptan-4-one; di-isobutyl ketone	No data available.
4,6-dimethyl-2-heptanone	No data available.
2,6-dimethyl-4-heptanol	No data available.
Skin corrosion/irritation:	
Product:	No data available.
Specified substance(s)	
2,6-dimethylheptan-4-one; di-isobutyl ketone	(Rabbit, 72 h): none
4,6-dimethyl-2-heptanone	No data available.
2,6-dimethyl-4-heptanol	No data available.
Serious eye damage/eye irritation:	
Product:	No data available.
Specified substance(s)	
2,6-dimethylheptan-4-one; di-isobutyl ketone	unwashed eyes (Rabbit): Slight washed eyes (Rabbit): Slight
4,6-dimethyl-2-heptanone	No data available.
2,6-dimethyl-4-heptanol	No data available.
Respiratory or skin sensitization:	
Product:	No data available.
Specified substance(s)	
2,6-dimethylheptan-4-one; di-isobutyl ketone	Skin Sensitization:, (Guinea Pig) - non-sensitizing
4,6-dimethyl-2-heptanone	No data available.
2,6-dimethyl-4-heptanol	No data available.
Mutagenicity	
In vitro	
Product:	No data available.
Specified substance(s)	
2,6-dimethylheptan-4-one; di-isobutyl ketone	No data available.
4,6-dimethyl-2-heptanone	No data available.
2,6-dimethyl-4-heptanol	No data available.



In vivo

Product: No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone No data available.
4,6-dimethyl-2-heptanone No data available.
2,6-dimethyl-4-heptanol No data available.

Carcinogenicity

Product: No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone No data available.
4,6-dimethyl-2-heptanone No data available.
2,6-dimethyl-4-heptanol No data available.

Reproductive toxicity

Product: No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone No data available.
4,6-dimethyl-2-heptanone No data available.
2,6-dimethyl-4-heptanol No data available.

Specific target organ toxicity - single exposure

Product: No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone No data available.
4,6-dimethyl-2-heptanone No data available.
2,6-dimethyl-4-heptanol No data available.

Specific target organ toxicity - repeated exposure

Product: No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone No data available.
4,6-dimethyl-2-heptanone No data available.
2,6-dimethyl-4-heptanol No data available.

Aspiration hazard

Product: No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone May be harmful if swallowed and enters airways.
4,6-dimethyl-2-heptanone May be harmful if swallowed and enters airways.
2,6-dimethyl-4-heptanol No data available.

Other adverse effects: No data available.

SECTION 12: Ecological information

Toxicity

Acute toxicity

Fish

Product: No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone	LC-50 (Rainbow Trout, 96 h): 30 mg/l LC-50 (Fathead Minnow, 96 h): > 81 mg/l
4,6-dimethyl-2-heptanone	No data available.
2,6-dimethyl-4-heptanol	No data available.

Aquatic invertebrates

Product: No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone	EC-50 (Water Flea, 48 h): 37.2 mg/l LC-50 (daphnid, 96 h): > 81 mg/l
4,6-dimethyl-2-heptanone	No data available.
2,6-dimethyl-4-heptanol	No data available.

Chronic Toxicity

Fish

Product: No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone	No data available.
4,6-dimethyl-2-heptanone	No data available.
2,6-dimethyl-4-heptanol	No data available.

Aquatic invertebrates

Product: No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone	No data available.
4,6-dimethyl-2-heptanone	No data available.
2,6-dimethyl-4-heptanol	No data available.

Toxicity to Aquatic Plants

Product: No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone	ErC50 (Alga, 72 h): 46.9 mg/l
4,6-dimethyl-2-heptanone	No data available.
2,6-dimethyl-4-heptanol	No data available.

Persistence and degradability

Biodegradation

Product: No data available.

Specified substance(s)



2,6-dimethylheptan-4-one; di-isobutyl ketone 88 % (20 d)
4,6-dimethyl-2-heptanone No data available.
2,6-dimethyl-4-heptanol No data available.

Biological Oxygen Demand:

Product No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone No data available.
4,6-dimethyl-2-heptanone No data available.
2,6-dimethyl-4-heptanol No data available.

Chemical Oxygen Demand:

Product No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone 2,880 mg/g
4,6-dimethyl-2-heptanone No data available.
2,6-dimethyl-4-heptanol No data available.

BOD/COD ratio

Product No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone No data available.
4,6-dimethyl-2-heptanone No data available.
2,6-dimethyl-4-heptanol No data available.

Bioaccumulative potential

Product: No data available.

Specified substance(s)

2,6-dimethylheptan-4-one; di-isobutyl ketone Fish, Bioconcentration factor (BCF): 130
4,6-dimethyl-2-heptanone No data available.
2,6-dimethyl-4-heptanol No data available.

Mobility in soil:

No data available.

Known or predicted distribution to environmental compartments

2,6-dimethylheptan-4-one; di-isobutyl ketone No data available.
4,6-dimethyl-2-heptanone No data available.
2,6-dimethyl-4-heptanol No data available.

Results of PBT and vPvB assessment:

No data available.

2,6-dimethylheptan-4-one; di-isobutyl ketone No data available.
4,6-dimethyl-2-heptanone No data available.
2,6-dimethyl-4-heptanol No data available.



Other adverse effects: No data available.

SECTION 13: Disposal considerations

Waste treatment methods

General information: No data available.

Disposal methods: Dispose of waste and residues in accordance with local authority requirements. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied.

SECTION 14: Transport information

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

DOT

Class combustible liquid, Packing group III for quantities of 450 liters (119 gallons) or more; not regulated for smaller quantities

Possible Shipping Description(s):

not regulated

UN 1157 Diisobutyl Ketone combustible liquid III

IMDG - International Maritime Dangerous Goods Code

Possible Shipping Description(s):

UN 1157 DIISOBUTYL KETONE 3 III

IATA

Possible Shipping Description(s):

UN 1157 Diisobutyl ketone 3 III

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS (Canada) Status: controlled

WHMIS (Canada) Hazard Classification: B/3

SARA 311-312 Hazard Classification(s):

fire hazard

US EPCRA (SARA Title III) Section 313 - Toxic Chemical List

NONE

OSHA: hazardous

TSCA (US Toxic Substances Control Act): All components of this product are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): All components of this product are listed on the DSL. Any impurities present in this product are exempt from listing.

AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): All components of this product are listed on AICS or otherwise comply with NICNAS.

MITI (Japanese Handbook of Existing and New Chemical Substances): All components of this product are listed in the Handbook or have been approved in Japan by new substance notification.

ECL (Korean Toxic Substances Control Act): All components of this product are listed on the Korean inventory or otherwise comply with the Korean Toxic Substances Control Act.

Inventory of Existing Chemical Substances in China: All components of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

SECTION 16: Other information

HMIS® Hazard Ratings: Health - 1, Flammability - 2, Chemical Reactivity - 1

HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

Revision Information: Not relevant.

Key literature references and sources for data: No data available.

Training information: No data available.

Issue date: 06/25/2015

SDS No.:

Disclaimer: This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.